

**LPDES PERMIT NO. LA0100099, AI No. 42895**

**LPDES STATEMENT OF BASIS**  
**FOR THE DRAFT LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM**  
**(LPDES) PERMIT TO DISCHARGE TO WATERS OF LOUISIANA**

- I. Company/Facility Name:** Praxair, Inc.  
Sulphur Facility  
Post Office Box 2419  
Sulphur, LA 70664
- II. Issuing Office:** Louisiana Department of Environmental Quality (LDEQ)  
Office of Environmental Services  
Post Office Box 4313  
Baton Rouge, Louisiana 70821-4313
- III. Prepared By:** Jenniffer Sheppard  
Industrial Permits Section  
Water Permits Division  
Phone #: 225-219-3138  
E-mail: jenniffer.sheppard@la.gov

**Date Prepared:** March 7, 2008

**IV. Permit Action/Status:****A. Reason For Permit Action:**

Proposed revocation and reissuance of a current Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term following regulations promulgated at LAC 33:IX.2711/40 CFR 122.46, LAC 33:IX.2903/40 CFR 122.62, and LAC 33:IX.3105/40 CFR 124.5\*.

\* In order to ease the transition from NPDES to LPDES permits, dual regulatory references are provided where applicable. The LAC references are the legal references while the 40 CFR references are presented for informational purposes only. In most cases, LAC language is based on and is identical to the 40 CFR language. 40 CFR Parts 401, and 405-471 have been adopted by reference at LAC 33:IX.4903 and will not have dual references. In addition, state standards (LAC 33:IX. Chapter 11) will not have dual references.

LAC 33:IX Citations: Unless otherwise stated, citations to LAC 33:IX refer to promulgated regulations listed at Louisiana Administrative Code, Title 33, Part IX.

40 CFR Citations: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations in accordance with the dates specified at LAC 33:IX.4901, 4903, and 2301.F.

- B. NPDES permit -** NPDES permit effective date: N/A  
NPDES permit expiration date: N/A  
EPA has not retained enforcement authority.

Statement of Basis for  
Praxair, Inc., Sulphur Plant  
LA0100099, AI No. 42895  
Page 2

- C. LPDES permit - LPDES permit effective date: Jul 1, 2005  
LPDES permit expiration date: June 30, 2010
- D. Application received on February 19, 2008. Additional Information received by e-mail on March 6, 2008.

**V. Facility Information:**

- A. Location - 4451 Louisiana State Highway 108 South, in Sulphur  
Front Gate: Latitude 30°11'08", Longitude 93°19'30"

- B. Applicant Activity -

According to the application, Praxair, Inc., Sulphur Facility, is a hydrogen manufacturing plant which produces gaseous hydrogen using a natural gas reforming method. Product then ships to customers via pipeline. The facility's discharges include utility wastewater including non-contact cooling tower blowdown, boiler blowdown, steam condensate, and water softener backwash; miscellaneous de minimis wastewaters including fire training activity water, eyewash station and safety shower water, uncontaminated groundwater from monitoring activities, compressor condensate, and general facility wash water where no detergents are used and no spills or leaks of hazardous materials have occurred (unless all spill material has been properly removed); treated sanitary wastewater; and uncontaminated stormwater to the Calcasieu River Ship Channel.

The process includes a reformer furnace for hydrogen production, several reactors for catalyst and impurities and a Pressure Swing Adsorption (PSA) Unit for separation of any remaining impurities from the hydrogen product or by-products of the reformer operation. Also included are associated boiler feed water, steam, and cooling tower facilities.

This plant went on-line in 1996 and would be subject to the Inorganic Chemicals, Carbon Monoxide and By-Product Hydrogen Production Subcategory, 40 CFR Part 415, Subpart AG. However, there are no NSPS effluent limitations promulgated, only BPT effluent limitations for existing sources have been promulgated. There is no process wastewater generated during hydrogen production.

Praxair, Inc.'s Sulphur Plant is currently in the process of rerouting all facility discharges from Bayou D'Inde to the Calcasieu River Ship Channel due to the Total Copper allocations established in the Upper Calcasieu River Toxics TMDL for Subsegment 030901. Praxair has been collecting quarterly samples for Total Copper using the clean metals sampling technique since the issuance of their current LPDES permit, effective on July 1, 2005. The analytical results demonstrate that Praxair will not be able to comply with the current Total Copper limitation without use of additional, cost-prohibitive metals removal treatment. Therefore, Praxair, Inc. has requested the revocation and reissuance of their existing LPDES permit to allow the reroute of their wastewater and to receive consideration for an additional allocation of Total Copper, to be taken from the Calcasieu River Ship Channel Margin of Safety (MOS).

Statement of Basis for  
Praxair, Inc., Sulphur Plant  
LA0100099, AI No. 42895  
Page 3

- C. Sources of Technology Based Limits:  
LDEQ Stormwater Guidance, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6).  
LDES Multi-Sector General Permit for Stormwater Discharges at Industrial Facilities.  
Louisiana Water Quality Management Plan for Sanitary Dischargers.  
LDEQ Sanitary General Permits.  
Best Professional Judgement.
- D. Fee Rate -  
1. Fee Rating Facility Type: minor  
2. Complexity Type: II  
3. Wastewater Type: III  
4. SIC code: 2813
- E. Facility Effluent Flow - 0.04896 MGD (long term average flow).

**VI. Receiving Waters:** Calcasieu River Ship Channel

1. TSS (15%), mg/L: 10.5
2. Average Hardness, mg/L  $\text{CaCO}_3$ : 977.6
3. Critical Flow, cfs: 2898
4. Mixing Zone Fraction: 0.3333
5. Harmonic Mean Flow, cfs: 8694
6. River Basin: Calcasieu River, Segment No. 030301
7. Designated Uses:

The designated uses are primary contact recreation, secondary contact recreation, and fish and wildlife propagation.

Information based on the following: Water Quality Management Plan; LAC 33:IX Chapter 11/Recommendation(s) from the Engineering Section. The information above was presented in a memorandum from Will Barlett to Jenniffer Sheppard, dated March 6, 2008.

**VII. Outfall Information:**

Outfall 001

- A. Type of wastewater - the discharge of utility wastewater including non-contact cooling tower blowdown, boiler blowdown, steam condensate, and water softener backwash; and miscellaneous de minimis wastewaters including fire training activity water, eyewash station and safety shower water, uncontaminated groundwater from monitoring activities, compressor condensate, and general facility wash water where no detergents are used and no spills or leaks of hazardous materials have occurred (unless all spill material has been properly removed).
- B. Location - at the point of discharge from the process water discharge pipe after combination of all utility wastewaters and prior to combining with other waters at the concrete pad located northwest of the natural gas preheaters, at Latitude 30°11'08", Longitude 93°19'30".

Statement of Basis for  
Praxair, Inc., Sulphur Plant  
LA0100099, AI No. 42895  
Page 4

After the monitoring point, these discharges commingle with Outfalls 002 and 003 and are collectively discharged to the Calcasieu River Ship Channel, at Latitude 30°10'47", Longitude 93°19'01".

- C. Treatment - None
- D. Flow - Intermittent, (long term average flow is 0.04896 MGD)
- E. Receiving waters - Calcasieu River Ship Channel
- F. Basin and segment - Calcasieu River Basin, Segment 030301

Outfall 002

- A. Type of wastewater - the discharge of treated sanitary wastewater.
- B. Location - at the point of discharge from the sanitary wastewater treatment plant's discharge pipe and prior to combining with other waters at the concrete pad located northwest of the natural gas preheaters, at Latitude 30°11'08", Longitude 93°19'30".

After the monitoring point, this discharge commingles with Outfalls 001 and 003 and are collectively discharged to the Calcasieu River Ship Channel, at Latitude 30°10'47", Longitude 93°19'01".

- C. Treatment - treatment of sanitary wastewaters consists of:
  - Activated sludge
  - Chlorine disinfection.
- D. Flow - Intermittent (estimated flow of 0.000176 MGD)
- E. Receiving waters - Calcasieu River Ship Channel
- F. Basin and segment - Calcasieu River Basin, Segment 030301

Outfall 003

- A. Type of wastewater - the discharge of uncontaminated storm water runoff from process and non-process areas.
- B. Location - at the point of stormwater collection at the concrete pad located northwest of the natural gas preheaters and prior to combining with other waters, at Latitude 30°11'08", Longitude 93°19'30".

After the monitoring point, this discharge commingles with Outfalls 001 and 002 and are collectively discharged to the Calcasieu River Ship Channel, at Latitude 30°10'47", Longitude 93°19'01".

- C. Treatment - None

Statement of Basis for  
Praxair, Inc., Sulphur Plant  
LA0100099, AI No. 42895  
Page 5

- D. Flow - Intermittent
- E. Receiving waters - Calcasieu River Ship Channel
- F. Basin and segment - Calcasieu River Basin, Segment 030301

#### **VIII. Proposed Changes Section**

The specific effluent limitations and/or conditions will be found in the draft permit. Development and calculation of permit limits are detailed in the Permit Limit Rationale section below.

Summary of Proposed Changes From the Current LPDES Permit:

- A. Praxair, Inc.'s Sulphur Plant is currently in the process of rerouting all facility discharges from Bayou D'Inde to the Calcasieu River Ship Channel (at Latitude 30°10'47", Longitude 93°19'01") due to the Total Copper allocations established in the Upper Calcasieu River Toxics TMDL for Subsegment 030901. Praxair, Inc. has requested the revocation and reissuance of their existing LPDES permit to allow the wastewater to be rerouted to the new location. This request has been granted.
- B. Outfall 001 - The proposed draft does not contain Interim Limitations for the TMDL parameters, Total Copper and Total Mercury. In the LPDES Permit, effective on July 1, 2005, Interim Limitations were established in order to give Praxair, Inc. sufficient time to come into compliance with water quality standards. Interim limitations were effective upon issuance of the permit and set to expire on June 12, 2008. Final Limitations were to be effective on June 13, 2008. Therefore, since issuance of this permit should occur either shortly before the June 13, 2008 date, or some time after, LDEQ has determined that it is not necessary to establish an Interim Limitation schedule in the proposed draft permit.
- C. Outfall 001 - A revised Total Copper wasteload allocation has been established (from 0.00373 lbs/day, daily maximum to 0.09 lbs/day, daily maximum). Praxair has been collecting quarterly samples for Total Copper using the clean metals sampling technique since issuance of their current LPDES permit, effective on July 1, 2005. The analytical results demonstrate that Praxair will not be able to comply with the current Total Copper limitations without use of additional, cost-prohibitive metals removal treatment. Therefore, Praxair, Inc. has requested to move their final discharge point to the Calcasieu River Ship Channel (Subsegment 030301) in order to receive consideration for an additional allocation of Total Copper from the Margin of Safety (MOS). This request has been granted. A small portion (0.08627 lbs/day) of the remaining MOS (5.85 lbs/day) at Subsegment 030301 has been allocated to Praxair, Inc.'s Sulphur Plant for a revised loading of 0.09 lbs/day, daily maximum.
- D. Outfall 001 - The proposed draft permit does not contain a site-specific MQL for Total Copper. In the LPDES Permit effective on July 1, 2005, a site-specific MQL of 9.13 µg/L was established in order to protect against the potential for discharges of the TMDL pollutants at levels above that of state water quality standards, and for discharges exceeding state water quality standards. A new evaluation has been done using the revised Total Copper limitation. The newly calculated MQL was well above the standard MQL for Total Copper.

Statement of Basis for  
Praxair, Inc., Sulphur Plant  
LA0100099, AI No. 42895  
Page 6

Therefore, LDEQ has determined that a site specific MQL is not necessary. The standard MQL for Total Copper ( $10\mu\text{g/L}$ ) has been applied.

- E. Outfall 001 - Praxair, Inc. has requested a monitoring frequency reduction for Total Mercury from 1/3 months to 1/year. This request has been granted based on two and a half years of analytical data collected (approximately 10 samples) using the clean metals sampling technique (presented in the February 19, 2008 LPDES permit application, Table 2, EDMS Document ID 36611736). The maximum results reported in lbs/day for Total Mercury has been 0.000003 and the permit limit is 0.0000257 lbs/day. This results in a ratio of the maximum result, to the permit limitation of 11.67%. Based on this information, LDEQ has determined that Total Mercury is not expected to be on-site and/or discharged through Outfall 001 at levels that would cause or contribute to further impairments. Therefore, LDEQ has granted a monitoring frequency reduction from 1/quarter to 1/year, in accordance with Section 6 of LDEQ's "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, Water Quality Management Plan, Version 4.
- E. Outfall 002 - Sanitary discharge limitations have been revised to be consistent with Schedule B of the LPDES Class I Sanitary General Permit, LAG530000. Changes include the addition of Monthly Average limitations for BOD<sub>5</sub> and TSS of 30 mg/L, and 200 colonies/100 ml for Fecal Coliform.

#### IX. Permit Limit Rationale:

The following section sets forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit.

##### A. Outfall 001 - Utility Wastewater & Miscellaneous Discharges

\*Outfall 001 - the discharge of utility wastewater including non-contact cooling tower blowdown, boiler blowdown, steam condensate, and water softener backwash; and miscellaneous de minimis wastewaters including fire training activity water, eyewash station and safety shower water, uncontaminated groundwater from monitoring activities, compressor condensate, and general facility wash water where no detergents are used and no spills or leaks of hazardous materials have occurred (unless all spill material has been properly removed).

Utility wastewaters and miscellaneous discharges being discharged to discrete outfalls receive BPJ limitations/monitoring requirements according to the following schedule:

<u>PARAMETER</u>	<u>MONTHLY AVERAGE MG/L</u>	<u>DAILY MAXIMUM MG/L</u>	<u>MONITORING FREQUENCY</u>
Flow (MGD)	Report	Report	1/week
TOC	---	50	1/week
Oil & Grease	---	15	1/week

Statement of Basis for  
Praxair, Inc., Sulphur Plant  
LA0100099, AI No. 42895  
Page 7

<b><u>PARAMETER</u></b>	<b><u>MONTHLY AVERAGE MG/L</u></b>	<b><u>DAILY MAXIMUM MG/L</u></b>	<b><u>MONITORING FREQUENCY</u></b>
Total Copper	---	0.09 lbs/day	1/quarter
Total Mercury	---	0.0000257 lbs/day	1/year
Total Residual Chlorine	---	1.5	1/week
Additives	Report	Report	1/week
pH (standard units)	6.0	9.0	1/week

#### **Site-Specific Consideration(s) for Outfall 001**

Flow - established in accordance with LAC 33:IX.2707.I.1.b. Flow shall be monitored 1/week, reported as an estimated value. These requirements have been retained from the current LPDES permit, effective on July 1, 2005.

PH - established in accordance with LAC 33:IX.1113.C.1. PH shall be monitored 1/week by Grab Sample. These requirements have been retained from the current LPDES permit, effective on July 1, 2005.

TOC, Oil & Grease, and Total Residual Chlorine - effluent limitations are established in accordance with Best Professional Judgment (BPJ) at a frequency of 1/week, by Grab Sample. These requirements have been retained from the current LPDES permit, effective on July 1, 2005.

Additives- effluent monitoring requirements are established in accordance with Best Professional Judgment (BPJ) at a frequency of 1/week, reported as an inventory calculation. These requirements have been retained from the current LPDES permit, effective on July 1, 2005.

#### **Site-Specific Water Quality Discussion for Outfall 001**

Analytical results from the permittee's application were screened against state water quality numerical standard based limits by following guidance procedures established in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001. Calculations, results, and documentation are given in Appendices A-1 and A-2.

In accordance with LAC 33:IX.2707.D.1/40 CFR § 122.44(d)(1), the existing (or potential) discharge (s) was evaluated in accordance with the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001, to determine whether pollutants would be discharged "at a level which will cause, have the

Statement of Basis for  
Praxair, Inc., Sulphur Plant  
LA0100099, AI No. 42895  
Page 8

reasonable potential to cause, or contribute to an excursion above any state water quality standard." Calculations, results, and documentation are given in Appendices A-1 and A-2.

Minimum quantification levels (MQL's) for state water quality numerical standards-based effluent limitations are set at the values listed in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001. They are also listed in Part II of the permit.

The following parameters were assigned water quality based effluent limitations:

<b>POLLUTANT(S)</b>
Total Mercury
Total Copper

Total Mercury - The *TMDL for Toxics in the Calcasieu Estuary*, issued on June 13, 2002, assigned Praxair, Inc.'s Sulphur Plant a daily maximum mass limitation of 0.0000257 lbs/day (Subsegment 030901). For this permit issuance, Praxair proposes to move their discharge from Bayou D'Inde location to the Calcasieu River Ship Channel (Subsegment 030301). Since Praxair is currently well below the TMDL limitation, no additional allocation will be granted for Total Mercury. Praxair, Inc. has requested a monitoring frequency reduction for Total Mercury from 1/3 months to 1/year. This request has been granted based on two and a half (2.5) years of analytical data collected (approximately 10 samples) using the clean metals sampling technique (presented in the February 19, 2008 LPDES permit application, Table 2, EDMS Document ID 36611736). The maximum reported results in lbs/day for Total Mercury has been 0.000003 and the permit limit is 0.0000257 lbs/day. This results in a ratio of the maximum result to the permit limitation of 11.67%. Based on this information, LDEQ has determined that Total Mercury is not expected to be on-site and/or discharged through Outfall 001 at levels that would cause or contribute to further impairments. Therefore, LDEQ has granted a monitoring frequency reduction from 1/3 months to 1/year, in accordance with Section 6 of LDEQ's "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, Water Quality Management Plan, Version 4. The sample type of Grab has been retained from the current LPDES permit, effective on July 1, 2005.

To protect against the potential for discharges of the TMDL pollutant mercury at levels above that of state water quality standards, and for discharges at levels exceeding state water quality standards, a site specific MQL was evaluated for this parameter using the equations below. Total Mercury detection was 0.06 µg/L which is below the standard MQL of 0.2 µg/L. Therefore, the site-specific MQL of 0.06 µg/L has been applied for Total Mercury.

$$\text{MQL (mg/L)} = \frac{\text{TMDL assigned Loading for Total Mercury}}{(0.04896 \text{ MGD Flow used in TMDL}) \times 8.34 \text{ conversion factor}}$$

$$\text{MQL (µg/L)} = \text{MQL (mg/L)} \times 1000$$



Statement of Basis for  
Praxair, Inc., Sulphur Plant  
LA0100099, AI No. 42895  
Page 9

<b><u>POLLUTANT</u></b>	<b><u>TMDL LOADING (LBS/DAY)</u></b>	<b><u>Flow (MGD)</u></b>	<b><u>CONVERSION FACTOR</u></b>	<b><u>MQL DETECTION LIMIT µg/L</u></b>
Mercury	0.0000257	0.04896	8.34	0.06

Should an EPA approved test method not be available to achieve the stated detection level, then the most sensitive EPA approved method is required, and the permittee can record zero or a less than value on the DMR in the event of any analytical result that is less than the most sensitive reporting limit.

**Total Copper** - A revised Total Copper wasteload allocation has been established (from 0.00373 lbs/day, daily maximum to 0.09 lbs/day, daily maximum). Praxair has been collecting quarterly samples for Total Copper using the clean metals sampling technique since issuance of their current LPDES permit, effective on July 1, 2005. The analytical results demonstrate that Praxair will not be able to comply with the current Total Copper limitations without use of additional, cost-prohibitive metals removal treatment. Therefore, Praxair, Inc. has requested to move their final discharge point to the Calcasieu River Ship Channel (Subsegment 030301) in order to receive consideration for an additional allocation of Total Copper from the Margin of Safety (MOS).

While Praxair, Inc. opposes incorporation of the TMDL into their current LPDES permit, they are aware that the LDEQ is required to ensure consistency with the Water Quality Management Plan requirements approved by EPA under Section 208(b) of the Clean Water Act (CWA), as cited in LAC 33:IX.2707.D.6. Therefore, Praxair, Inc. has requested consideration of additional allocation using the MOS for Total Copper (0.08627 lbs/day) under Subsegment 030301.

After review of the request for specific allocations in the February 19, 2008 LPDES permit application, the LDEQ proposes to use one and a half percent (1.5%) or 0.08627 lbs/day of the remaining Subsegment 030301 TMDL MOS (5.85 lbs/day) for Total Copper, plus the applicable allocation (0.00373 lbs/day) assigned in the Bayou D'Inde TMDL under Subsegment 030901.

<b>PARAMETER</b>	<b>UNUSED PORTION OF THE CALCASIEU SHIP CHANNEL MOS (030301)</b>	<b>REQUESTED MOS USE FROM THE CALCASIEU SHIP CHANNEL (030301)</b>	<b>BAYOU D'INDE (030901) TMDL ALLOCATION</b>	<b>CALCASIEU RIVER SHIP CHANNEL MOS ALLOCATION PLUS BAYOU D'INDE TMDL ALLOCATION</b>
	<b>LBS/DAY</b>	<b>LBS/DAY</b>	<b>LBS/DAY</b>	<b>LBS/DAY</b>
Total Copper	5.85	0.08627	0.00373	0.09

Statement of Basis for  
Praxair, Inc., Sulphur Plant  
LA0100099, AI No. 42895  
Page 10

The monitoring frequency and sample type for Total Copper will be retained at 1/quarter (previously presented as 1/3 months, but changed to be consistent with current monitoring frequency naming conventions) by Grab Sample, from the current LPDES permit effective on July 1, 2005.

To protect against the potential for discharges of the TMDL pollutant, copper at levels above that of state water quality standards, and for discharges at levels exceeding state water quality standards, a site specific MQL was evaluated for this parameter using the equations below. MQL detection for Total Copper was calculated at  $220\mu\text{g/L}$ , which is well above the standard MQL. Therefore, LDEQ has determined that a site specific MQL is not needed for Total Copper. The standard MQL of  $(10\mu\text{g/L})$  has been applied.

B. Outfall 002 - Sanitary Wastewater

**\*Outfall 002** - the discharge of treated sanitary wastewater.

Sanitary wastewaters (internal or external) are regulated in accordance with LAC 33:IX.711 or 709.B, by BPJ utilizing the sanitary general permits issued by this Office, and the Louisiana Water Quality Management Plan, Areawide Sanitary Effluent Limits Policy, and Statewide Sanitary Effluent Limits Policy, as applicable. Concentration limits are used in accordance with LAC 33:IX.2707.F.1.b which states that mass limitations are not necessary when applicable standards and limitations are expressed in other units of measurement. LAC 33:IX.709.B references LAC 33:IX.711 which express  $\text{BOD}_5$  and TSS in terms of concentration.

<u>PARAMETER</u>	<u>MONTHLY AVERAGE MG/L</u>	<u>WEEKLY AVERAGE MG/L</u>	<u>MONITORING FREQUENCY</u>
Flow (MGD)	Report	Report	1/6 months
$\text{BOD}_5$	30	45	1/6 months
TSS	30	45	1/6 months
Fecal Coliform colonies/100 ml	200	400	1/6 months
pH (standard units)	6.0	9.0	1/6 months

**Site-Specific Consideration(s) for Outfall 002**

Flow - established in accordance with LAC 33:IX.2707.I.1.b. Flow shall be monitored 1/6 months, reported as an estimated value. These requirements have been retained from the current LPDES permit, effective on July 1, 2005 and are consistent with the requirements established in Schedule B of the Class I Sanitary General Permit, LAG530000.

Statement of Basis for  
Praxair, Inc., Sulphur Plant  
LA0100099, AI No. 42895  
Page 11

PH - established in accordance with LAC 33:IX.1113.C.1. PH shall be monitored 1/6 months by Grab Sample. These requirements have been retained from the current LPDES permit, effective on July 1, 2005 and are consistent with the requirements established in Schedule B of the Class I Sanitary General Permit, LAG530000.

BOD<sub>5</sub>, TSS, and Fecal Coliform - Monthly Average and Weekly Average limitations were established based in accordance with the requirements in Schedule B of the LPDES Class I Sanitary General Permit, LAG530000 and are applied based on best professional judgment. These parameters shall be monitored 1/6 months by Grab Sample. The monitoring frequency requirements have been retained from the current LPDES permit, effective on July 1, 2005 and are also consistent with the requirements established in Schedule B of the Class I Sanitary General Permit.

C. Outfall 003 - Stormwater

**\*Outfall 003** - the discharge of uncontaminated storm water runoff from process and non-process areas.

Uncontaminated stormwater discharged through discrete outfall(s) shall receive the following BPJ limitations in accordance with this Office's guidance on stormwater, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6).

<u>PARAMETER</u>	<u>MONTHLY AVERAGE MG/L</u>	<u>DAILY MAXIMUM MG/L</u>	<u>MONITORING FREQUENCY</u>
Flow (MGD)	Report	Report	1/quarter
TOC	---	50	1/quarter
Oil and Grease	---	15	1/quarter
pH (standard units)	6.0	9.0	1/quarter

**Site-Specific Consideration(s) for Outfall 003**

Flow - established in accordance with LAC 33:IX.2707.I.1.b. Flow shall be monitored 1/quarter, reported as an estimated value. These requirements have been retained from the current LPDES permit, effective on July 1, 2005 and are consistent with those established in the Multi-Sector General Permit for Industrial Dischargers (LAR050000) and current stormwater guidance.

PH - established in accordance with LAC 33:IX.1113.C.1. PH shall be monitored 1/quarter by Grab Sample. These requirements have been retained from the current LPDES permit, effective on July 1, 2005 and are consistent with those established in the Multi-Sector General Permit for Industrial Dischargers (LAR050000) and current stormwater guidance.

Statement of Basis for  
Praxair, Inc., Sulphur Plant  
LA0100099, AI No. 42895  
Page 12

TOC and Oil & Grease - TOC and Oil & Grease shall be monitored 1/quarter by Grab Sample. These requirements have been retained from the current LPDES permit, effective on July 1, 2005 and are consistent with those established in the Multi-Sector General Permit for Industrial Dischargers (LAR050000) and current stormwater guidance.

In accordance with LAC 33:IX.2707.I.3 and [40 CFR 122.44(i)(3) and (4)], a Part II condition is proposed for applicability to all storm water discharges from the facility, either through permitted outfalls or through outfalls which are not listed in the permit or as sheet flow. The Part II condition requires a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit, along with other requirements. If the permittee maintains other plans that contain duplicative information, those plans could be incorporated by reference to the SWP3. Examples of these type plans include, but are not limited to: Spill Prevention Control and Countermeasures Plan (SPCC), Best Management Plan (BMP), Response Plans, etc. The conditions will be found in the draft permit. Including Best Management Practice (BMP) controls in the form of a SWP3 is consistent with other LPDES and EPA permits regulating similar discharges of stormwater associated with industrial activity, as defined in LAC 33:IX.2522.B.14 [40 CFR 122.26(b)(14)].

X. TMDL WATERBODIES

Outfalls 001, 002, and 003

The discharges from Praxair, Inc.'s Sulphur Plant consisting of utility wastewater including non-contact cooling tower blowdown, boiler blowdown, steam condensate, and water softener backwash; and miscellaneous de minimis wastewaters including fire training activity water, eyewash station and safety shower water, uncontaminated groundwater from monitoring activities, compressor condensate, and general facility wash water where no detergents are used and no spills or leaks of hazardous materials have occurred (Outfall 001), treated sanitary wastewater (Outfall 002), and uncontaminated stormwater (Outfall 003) are discharged to the Calcasieu River Ship Channel, Segment No. 030301. The Calcasieu River Ship Channel is listed on the 2006 Integrated Report with 303(d) listings for Poly Aromatic Hydrocarbons (PAHs) and Polychlorinated Biphenyls (PCBs). To date four TMDLs have been finalized for the Upper Calcasieu Estuary.

PAH's - Benzo(a)anthracene and Benzo(a)pyrene

*The Upper Calcasieu Estuary TMDL for Contaminated Sediments* was finalized June 13, 2002, addressing the presence of Polynuclear Aromatic Hydrocarbons (PAH). Praxair, Inc. was not included in this TMDL due to the previous discharge location of Bayou D'Inde (Subsegment 030901). Based on a review of the types of wastewaters at this facility (utility, sanitary, and stormwater) and Praxair, Inc.'s indication in the February 19, 2008 LPDES permit application that these pollutants are believed absent, LDEQ has determined that benzo(a)anthracene and benzo(a)pyrene are not reasonably expected to be present in the discharges. Therefore, no additional requirements were added to Outfalls 001, 002, or 003.

PCBs

*The Upper Calcasieu Estuary TMDL* addressed Polychlorinated Biphenyls (PCBs) as an impairment. However, the TMDL did not establish wasteload allocations for any facility under subsegment 030301. Based on a review of the types of wastewaters at this facility (utility, sanitary, and stormwater), Praxair, Inc.'s indication in the February 19, 2008 LPDES permit application that PCBs are believed absent, and the absence of requirements for any other facility in this subsegment, LDEQ has

Statement of Basis for  
Praxair, Inc., Sulphur Plant  
LA0100099, AI No. 42895  
Page 13

determined that PCBs are not reasonably expected to be present in the discharges and/or cause further impairment to the receiving stream. Therefore, no additional requirements were added to this permit for Outfalls 001, 002, or 003.

Total Mercury

*The Upper Calcasieu Estuary TMDL for Mercury* was finalized June 13, 2002, addressing the presence of total mercury. Praxair, Inc. was not included in this TMDL due to the previous discharge location of Bayou D'Inde (Subsegment 030901). However, a daily maximum effluent limitation of 0.0000257 lbs/day Total Mercury was established for Praxair, Inc.'s Outfall 001, under the Bayou D'Inde Toxics TMDL. Praxair, Inc. has collected two and a half (2.5) years of analytical data (approximately 10 samples), using the clean metals sampling technique (presented in the February 19, 2008 LPDES permit application, Table 2, EDMS Document ID 36611736). The maximum reported results in lbs/day for Total Mercury has been 0.000003 and the permit limit is 0.0000257 lbs/day. This results in a ratio of the maximum result, to the permit limitation of 11.67%. Based on this information, LDEQ has determined that Total Mercury is not expected to be on-site and/or discharged through Outfall 001 at levels that would cause or contribute to further impairments. Therefore, the limitation implemented into the July 1, 2005 LPDES permit and has been retained in this permit without an additional allocation for the new discharge location.

The discharges from Outfalls 002 (sanitary wastewater) and 003 (stormwater) are not reasonably expected to cause or contribute to further mercury impairments in the receiving waterbody. Therefore, no additional requirements were added to Outfalls 002 or 003 as a result of the mercury impairment.

Total Copper

*The Upper Calcasieu Estuary TMDL for Copper* was finalized June 13, 2002, addressing the presence of Total Copper. Praxair, Inc. was not included in this TMDL due to the previous discharge location of Bayou D'Inde (Subsegment 030901). However, a daily maximum effluent limitation of 0.00373 lbs/day Total Copper for Praxair, Inc. was established for Outfall 001 under the Bayou D'Inde Toxics TMDL.

Praxair, Inc. has collected two and a half (2.5) years of analytical data (approximately 10 samples) using the clean metals sampling technique (presented in the February 19, 2008 LPDES permit application, Table 2, EDMS Document ID 36611736). The analytical results demonstrate that Praxair will not be able to comply with the current Total Copper limitation of 0.00373 lbs/day daily maximum without use of additional, cost-prohibitive metals removal treatment. Therefore, Praxair, Inc. has requested to move their final discharge point to the Calcasieu River Ship Channel (Subsegment 030301) in order to receive consideration for an additional allocation of Total Copper from the Margin of Safety (MOS). This request has been granted. One and a half percent (1.5 %), or 0.08627 lbs/day, of the remaining Subsegment 030301 MOS (5.85 lbs/day) for Total Copper has been allocated to Praxair, Inc.'s Sulphur Plant. The daily maximum loading of 0.00373 lbs/day allocated in Bayou D'Inde TMDL will be added to the new allocation in the Calcasieu River Ship Channel. Therefore, the revised daily maximum limitation for Total Copper at Outfall 001 has been established at 0.09 lbs/day.

The discharges from Outfalls 002 (sanitary wastewater) and 003 (stormwater) are not reasonably expected to cause or contribute to further copper impairments in the receiving waterbody. Therefore, no additional requirements were added to Outfalls 002 or 003 as a result of the copper impairment.

Statement of Basis for  
Praxair, Inc., Sulphur Plant  
LA0100099, AI No. 42895  
Page 14

Toxicity

*The Upper Calcasieu Estuary TMDL for Priority Organics* was finalized June 13, 2002, addressing the presence of organics. Praxair, Inc. was not included in this TMDL due to the previous discharge location of Bayou D'Inde (Subsegment 030901). Toxicity requirements were not incorporated for this facility in the Bayou D'Inde TMDL. Based on a review of the types of wastewaters at this facility (utility, sanitary, and stormwater), Praxair, Inc.'s indication in the February 19, 2008 LPDES permit application that there are no process discharges, and the absence of toxicity requirements in the previous TMDL, LDEQ has determined that these discharges are not reasonably expected to cause toxicity in the receiving waterbody. Therefore, no additional requirements were added to Outfalls 001, 002, or 003.

**XI. Compliance History/DMR Review:**

A compliance history/DMR review was done covering the period of September 2003 to January 2008.

- A. DMR Excursions – None Reported
- B. Inspections - A facility inspection was conducted on September 18, 2003. There were no issues of concern noted.
- C. Compliance History - None

**XII. "IT" Questions - Applicant's Responses**

IT Questions and Praxair, Inc.'s responses can be found in the February 19, 2008 LPDES permit application, Appendix E, EDMS Document ID 36611736).

**XIII. ENDANGERED SPECIES**

The receiving waterbody, Subsegment 030301 of the Calcasieu River Basin is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated October 24, 2007 from Boggs (FWS) to Brown (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

**XIV. Historic Sites:**

The discharge is from an existing facility location, which does not include an expansion on undisturbed soils. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

Statement of Basis for  
Praxair, Inc., Sulphur Plant  
LA0100099, AI No. 42895  
Page 15

**XV. Tentative Determination:**

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to revoke and reissue a permit for the discharge described in the application.

**XVI. Variances:**

No requests for variances have been received by this Office.

**XVII. Public Notices:**

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List